

**This Page is Inserted by IFW Indexing and Scanning
Operations and is not part of the Official Record**

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

- ☐ **BLACK BORDERS**
- ☐ **IMAGE CUT OFF AT TOP, BOTTOM OR SIDES**
- ☐ **FADED TEXT OR DRAWING**
- ☐ **BLURRED OR ILLEGIBLE TEXT OR DRAWING**
- ☐ **SKEWED/SLANTED IMAGES**
- ☐ **COLOR OR BLACK AND WHITE PHOTOGRAPHS**
- ☐ **GRAY SCALE DOCUMENTS**
- ☐ **LINES OR MARKS ON ORIGINAL DOCUMENT**
- ☐ **REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY**
- ☐ **OTHER:** _____

IMAGES ARE BEST AVAILABLE COPY.

As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/620,373	07/20/2000	Michael R. Arneson	499.088US1	2873

21186 7590 08/16/2004

SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH, P.A.
P.O. BOX 2938
MINNEAPOLIS, MN 55402

EXAMINER

TSE, YOUNG TOI

ART UNIT PAPER NUMBER

2637

DATE MAILED: 08/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/620,373	ARNESON ET AL.	
	Examiner	Art Unit	
	YOUNG T. TSE	2637	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 July 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 8 is/are allowed.
- 6) ☒ Claim(s) 1-7 and 9-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 July 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>09/11/00&31/07/03</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

The drawings are objected to because the block pertaining elements in Figures 1-5, 7A-7D, 8, 8B and 8E need to have descriptive labels, in conformance with 37 CFR 1.84(n) and 1.84(o). For example, a descriptive label of "Driver" should be inserted into Figure 3 to properly describe element (330). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

1. The disclosure is objected to because of the following informalities: on page 5, line 5, "110" should be "(LLP) 110"; on page 6, lines 1-2, Applicants are requested to

Art Unit: 2637

update the U.S. Serial Number and delete the Attorney Docket Number; on page 7, line 1, there is no space between "146" and "can"; on page 8, lines 18 and 19, there is no space between "Path" and "Forward"; on page 22, lines 14 and 15, "Both a" should be "Both" and "generator" should be "generators". Applicants are requested to describe every block elements of the disclosure of the drawings in the specification in order to enable a person skill in the art to understand the present invention, especially Figures 7E, 8D, 8F, 17 and 18. Appropriate correction is required.

2. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Objections

3. Claims 5-7 and 10-29 are objected to because of the following informalities: In claim 5, line 14, delete one of the periods "."; In claim 10 (line 5), claim 13 (line 5), claim 16 (line 5), claim 20 (line 3), claim 23 (line 3) and claim 26 (line 3), "medium" should be "medium," in claim 19, line 3, a period "." Should be inserted after "output". Wherein the dependent claims 6-7, 11-12, 14-15, 17-18, 21-22, 24-26 and 27-29 are depended upon the independent claims 5, 10, 13, 16, 20, 23 and 26. Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Art Unit: 2637

5. Claims 1-7 and 10-29 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In each of the independent claims 1, 3, 5, 10, 13, 16, 20, 23 and 26, the phrase "canceller/equalizer" is vague and indefinite since it is unclear a "canceller" or an "equalizer", or the combination of a "canceller" and "equalizer"?

Wherein the dependent claims 2, 4, 6-7, 11-12, 14-15, 17-18, 21-22, 24-26 and 27-29 are depended upon the independent claims 1, 3, 5, 10, 13, 16, 20, 23 and 26.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claim 9 is rejected under 35 U.S.C. 102(e) as being anticipated by Miller et al..

Miller et al. (U.S. Patent No. 6,181,912 B1) discloses a method and apparatus for determining the accumulated error in a user terminal dock in a satellite communications system.

With respect to claim 9, Miller discloses a portion of the architecture of a user terminal transceiver 200 having a first digital data receiver 216A receives a first signal 502A transmitted by a first satellite and a second digital data receiver 216B receives a

Art Unit: 2637

second signal 502B transmitted by a second satellite; a deskew buffer 506A imposes time delay $T_{sub.r1}$ on the first signal and deskew buffer 506B imposes time delay $T_{sub.r2}$ on the second signal; the resulting signals 508A and 508B are thus time aligned; the signals 508A and 508B are combined by a combiner 512 and then deinterleaved and decoded by units 510 to produce signal 514. See col. 9, lines 32-49.

Allowable Subject Matter

8. Claim 8 is allowed.
9. Claims 1-7 and 10-29 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.
10. The following is a statement of reasons for the indication of allowable subject matter: the prior art fails to show or suggest a method of transferring data across a communication medium by driving and modifying an output signal on the communication medium as a function of an external signal to increase voltage swing of the output signal as a function of temperature or a transceiver coupled to a processor for communication with other circuits through the transmission medium having the combinations or parts a link level protocol, a driver including a driver circuit and an impedance control circuit, a canceller or equalizer, and a receiver including a receiver circuit and a bit deskew circuit.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Art Unit: 2637

Shuholm discloses a receiver or transceiver circuit comprising a line driver, an equalizer and a receiver for processing differential serial digital data signal by a signal source through a transmission medium.

Fung et al. discloses a communications system having a first transceiver within a first processor and a second transceiver within a second processor for communication with each other through a transmission medium.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Young Tse** whose telephone number is **(703) 305-4736**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Jay Patel**, can be reached at **(703) 308-7728**.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

P.O. Box 1450

Alexandria, VA 22313-1450

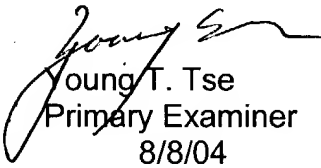
or faxed to:

(703) 872-9306

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).

Art Unit: 2637

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.


Young T. Tse
Primary Examiner
8/8/04